

Significant Legislative Rule Analysis
Chapter 246-272A WAC
Onsite Sewage Systems
Draft – January 5, 2005

Executive Summary

There are currently more than 800,000 onsite sewage systems (OSS), or septic systems, in Washington State. Between 15,000 and 20,000 new and replacement systems are installed annually. Approximately 30 percent of new homes across the state are built using an OSS. These numbers demonstrate that OSS are increasingly becoming a long-term and important option in wastewater infrastructure planning. However, OSS, if improperly located, designed, installed, operated or maintained, can adversely impact public health and environmental quality. Failing OSS also have economic impacts including potential reductions in property values and adverse effects on industries dependent on good water quality.

The State Board of Health (SBOH) sets minimum standards for the design, installation and operation of OSS to prevent these risks. The rules containing these standards, chapter 246-272 WAC, were last revised in 1995. Since that time, technology has changed and understanding of the treatment capabilities of soil has increased. These advances in our understanding help to increase the life of OSS and decrease the number of failures and the public health risks associated with failures. The rules need to be revised and updated to reflect these advances.

The proposed rules are based on recommendations by the Rule Development Committee (RDC), a stakeholder group including industry consumers, regulators, developers and environmental representatives. The Department of Health (DOH) modified the RDC's initial recommendations based on input received through workshops and public comment. The Department of Health's final recommendations to the SBOH include changes to the current rules in the following categories:

- **Product registration.** DOH maintains a list of products that meet public health standards. Products must be registered with the state before they can be used by designers or allowed by local health jurisdictions. These new sections will place in rule the specific criteria for this registration that, until now, have been contained in guidance.
- **Technical design, installation and operation requirements for systems designed for fewer than 3500 gallons per day.** Local health jurisdictions implement these portions of the rules as minimum requirements but may adopt more stringent codes to meet local needs. The changes include new requirements for treatment levels, hydraulic loading rates, distribution, use of disinfection, and designing systems to be more assessable.
- **Local planning/Operation and Maintenance (O&M).** The proposed rules require local health jurisdictions to write a plan for how and where OSS will be used in their jurisdictions. In addition, owners are responsible for assuring a complete inspection of their system every three years, as opposed to only checking the solids in their septic tank. Certain systems will be required to have an annual inspection.

The purpose of this document is to fulfill the requirements of RCW 34.05.328, primarily to demonstrate that the benefits of the proposed changes outweigh the costs, considering both qualitative and quantitative costs and benefits.

Different portions of the rule impose costs on different entities although it is likely that most costs will ultimately be borne by homeowners and other system owners.

- **Product registration** - Products must be tested by a certified lab to demonstrate effectiveness in order to be placed on the registered list. Only registered products may be used in the state. Depending on the category of product, this testing will cost \$20,000 to \$80,000. However, this cost is similar to that incurred under the current guidance-based framework for approval.
- **Technical design, installation and operation requirements** - These costs are difficult to quantify because the requirements are site specific. Some sites will see increased costs while others will see decreased costs. Currently, most new OSS range in cost from \$5,000 to \$20,000 depending on the limitations and sensitivity of the lot. Overall, the cost of the majority of systems will continue to be within this range.
- **Local planning/Operation and Maintenance (O&M)** - Writing a plan will increase costs for counties with marine shorelines, with some local health jurisdictions estimating a cost of \$40,000. The costs for non-marine counties are expected to be much less because their plan requirements are very similar to requirements in the current rules. The expanded requirements for maintenance inspections will result in increased costs for owners with more complex systems. Owners with these more complex systems will need to have an annual inspection as opposed to one every three years. Hiring a professional to perform these inspections is not required by the rules. However, if a system owner decides to hire a professional, these inspections generally cost between \$150 and \$300.

The primary benefits of these changes are realized through avoiding the costs resulting from inadequate or failing OSS. These include:

- **Waterborne disease outbreaks**- Pathogens in wastewater that can cause serious illness include hepatitis, E coli, typhoid, noroviruses, and cryptosporidium, to name a few. The US Environmental Protection Agency (EPA) estimates 168,000 viral illness and 34,000 bacterial illnesses occur each year as the result of consumption of drinking water from systems that rely on improperly treated ground water. The EPA 2002 Onsite Sewage Manual goes on to cite reports that OSS are the third most common source of ground water contamination.
- **Public health risks and environmental damage from high levels of nutrients (nitrogen & phosphorus)**- Water quality studies around the state show increasing nitrate levels in ground and surface water due, in part, to OSS. The public health concern posed by nitrogen is methemoglobinemia or blue-baby syndrome. Additionally, both fresh and marine waters are susceptible to contamination due to excessive nutrient loading. Reports from the Department of Ecology indicate that Hood Canal, Henderson Inlet, South Puget Sound, Port Susan, Lake Chelan and Lake Roosevelt have been adversely impacted by nutrient loadings.
- **Losses to the commercial and recreational shellfish industry**- The shellfish industry reports that 86 million pounds of shellfish worth \$76 million were harvested in 2002 and that recreational shellfish are estimated to bring \$35.7 million to Washington's economy

annually. These industries, as well as tourism and recreation, depend on clean water in order to thrive. However, the list of shellfish growing areas monitored by DOH that are threatened by pollution has increased from 9 sites in 1997 to 18 sites in 2004.

- **Repairing or replacing poorly designed, installed or operated OSS-** As noted above, an OSS costs between \$5,000 and \$20,000 and is a significant investment for most homeowners. Therefore, assuring that systems are designed, installed, operated and maintained properly helps promote the long-term life of OSS, reduces costs due to repairs and replacements, and protects the investment homeowners have made in their property.